

What is claimed is:

1. The combination with a telephone having a desk-mountable telephone chassis defining a generally planar front panel; telephone circuit means in said chassis for performing normal telephone transmission and reception functions; a plurality of push-button telephone input selector keys arranged upon the front panel of the chassis, each normally disposed in a first position and being moveable to a second position upon application thereto of an external mechanical stimuli; telephone input switching means in said chassis cooperatively connected for activation by movement of the telephone input selector keys between their first and second positions for providing input signals to said telephone circuit means; of a calculator operatively sharing with the telephone only the activating movement of its selector keys, comprising:

- a. general purpose calculator circuit means mounted on circuit boards within the chassis for performing arithmetic and manipulative operations on and in response to received digital information;
- b. an electro-mechanical switching grid in said chassis having a plurality of switching members physically and operatively independent of the telephone circuit means and of the telephone input switching means, connected to directly supply said digital information to said calculator circuit means, said switching members being operative in conductive and in non-conductive modes for producing said digital information;
- c. a plurality of push-button calculator actuator keys disposed across the front panel of the telephone chassis and including the plurality of telephone input selector keys, said calculator actuator keys being normally operable in a first position and being moveable to a second position upon receipt of an external mechanical stimuli;
- d. means for mounting said switching grid in cooperative alignment with said calculator keys such that each of such calculator actuator keys moving between its said first and said second positions directly activates at least one of said switching members of said switching grid distinctly separate from activation of the telephone input switching means; and
- e. visual display means mounted on the telephone chassis and operatively connected with said calculator circuit means for providing a visual numerical output display therefor.

2. The combination as recited in claim 1, wherein each of said plurality of push-button calculator actuator keys has an elongate stud projection longitudinally extending within the telephone chassis in the direction of travel of its respective key; and wherein said stud projection of each of said actuator keys is cooperatively aligned to directly engage an associated one of said switching members of said switching grid to operatively toggle said associated switching member between its said conductive and non-conductive modes for producing said digital information in response to movement of said key between its said first and said second positions.

3. The combination as recited in claim 2, wherein said calculator switching grid is sized for mounting in otherwise empty space within the telephone chassis below and slightly spaced apart from the front panel of the telephone chassis and such that said plurality of switching members address the lower surface of the

front panel; and wherein each of said switching members comprises a pair of normally open stationary contacts mounted in ordered configuration addressing the lower surface of the front panel, and a flexible moveable contact element, one each of said moveable contact elements being fixedly aligned with and operatively interposed between its associated said pair of stationary contacts and said stud projection of the associated calculator actuator key for switching the conductive states between said pair of said stationary contacts in response to movement of said associated calculator actuator key between its said first and second positions; said stud projection of each of said calculator actuator keys being operative when in its said second position to position said moveable contact element of its associated said switching member to electrically close the circuit between said associated pair of stationary contacts, causing said switching member to become operative in its said conductive state.

4. The calculator combination apparatus as recited in claim 3, wherein said flexible movable contact means includes mounting grid means for aligning and fixedly holding each of said flexible contact elements directly above and in slightly spaced apart alignment with its associated pair of stationary contacts and wherein each of said flexible contact elements comprises a flexible disc member having a conductive surface addressing its associated pair of stationary contacts and being of concave configuration as viewed from said stationary contacts, said mounting grid means normally maintaining said disc members in electrical insulated relationship with their associated pairs of stationary contacts and said disc members being flexibly deformable when engaged by said associated stud projections to engage their respective pairs of stationary contacts, causing electrical connection therebetween.

5. The combination as recited in claim 2, wherein said plurality of calculator actuator keys are further characterized by a first set of such keys comprising the telephone input selector keys, the operative movements between their said first and said second positions of which activate both the telephone input switching means and said calculator switching grid, and a second set of calculator function keys the operative movements of which activate only said calculator switching grid, wherein each of said first set of keys is characterized by:

- a. an upper portion sized to project above the front panel of the telephone chassis;
- b. means for preventing removal of said first set of keys through the front panel of the telephone chassis;
- c. a lower portion continuous with said upper portion and comprising a hollow downwardly extending tube-like member;
- d. a stud projection comprising an enlarged stud head cooperatively received and held in fixed position within said tube-like member, and an elongate stud body projecting a pre-determined distance below said tube-like member; and
- e. a spring coaxially aligned with said elongate stud body normally biasing its associated said actuator key toward its said second position and yieldingly moveable under pressure of an external mechanical stimuli to enable said associated actuator key to move to its said second position.

6. A method of providing a telephone of the type having a push-button input keyboard including a plu-